



Spring-planted Oat for Grazing or Hay Production

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Seasonal droughts are normal in the southern Great Plains. Droughts occurring during the fall and winter can be especially disruptive of a usually predictable supply of forage wheat. The two most common effects of drought are decreased forage availability for spring grazing and limited hay supplies. When wheat pasture fails due to drought, there are limited opportunities to recover lost forage production. The best option to offset forage losses from wheat pasture is spring-planted oat.

Oat can be planted in late winter through early spring for use as forage or hay and offer some help for increasing a short forage supply. However, this option can be somewhat expensive with substantial risk involved due to weather, insects and diseases. The most successful spring plantings occur when oat is drill-planted on a prepared seedbed and managed accordingly.

Currently, there is not a wide selection of oat varieties available. In Oklahoma, those varieties adapted for use in the southern U.S. are preferable to northern U.S. varieties. However, nearly all of the available oat seed is produced in the northern U.S. Feed oat has been successfully used and can provide excellent nutrition for many types of livestock. However, many of these have not been tested as seed oat and may contain weed seeds (noxious weed seeds in particular), have unknown seed germination and/or foreign material. Feed oat sources are usually relatively cheap, but they are rarely a wise purchase. In Oklahoma, seed law requires that seed being sold for planting purposes have a tag with a recent test result for germination, weed seed and foreign material.

Planting date and rate

The window for spring-planted oat is between February 15 and March 10. If dry weather and above freezing temperatures occur in late January and early February, the planting date can be shifted closer to February 15. However, if conditions are wet and cold during late January and early February, then planting may be delayed until early March. For best results, oat should be drill-planted on a conventionally tilled seedbed at a seeding rate of 80 to 100 pounds of seed per acre.

Seeding depth can be as deep as 1½ inches, but a depth of only ½ to ¾ inch will increase the rate of emergence, establishment and forage production potential. If oat is being considered for failed wheat pasture, no-till planting should be

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successful as long as there is a minimal amount of residue. Seeding depth remains at ½ to ¾ inch. Forage production potential from a spring-planted oat crop will average 1,500 to 2,000 pounds of forage per acre. Based on the forage production of spring-planted oat, N fertilizer at a rate of 40 to 60 pounds actual N per acre should be applied after establishment. However, less nitrogen may be applied if the field was previously fertilized for wheat production. If the wheat crop failed, a good portion of the applied nitrogen might still be present in the soil and available for the oats.

Forage management

Spring-planted winter oat varieties will normally yield less forage than fall-seeded winter wheat. This happens because most spring-planted oat will produce a single stem rather than several tillers after emergence. Fewer tillers result in slow forage growth during early spring and less regrowth after defoliation either by grazing or haying. For this reason, spring-planted oats need careful grazing management for achieving successful forage production.

Grazing

Begin grazing when plants reach 6 to 8 inches tall. At this point, the stems have begun to elongate and will provide an adequate amount of forage for grazing. Keep in mind that grazing during this time will remove the reproductive points, not allowing plants to mature, but maintaining forage production for a longer period. Stop grazing when plants are 2 to 3 inches tall. The remaining 2 to 3 inches of green leaf tissue and stems are essential for pasture recovery if conditions allow. Consider rotational grazing with other pastures as to not overgraze the system. Doing this will ensure pastures will always be available with good forage availability, and it eliminates overgrazing of a single area.

Spring-planted oat matures quite rapidly once the spring temperatures begin warming. Each acre of spring-planted oat should provide between 35 and 60 days of grazing for mature cattle. Growing animals (750 pounds) can be stocked at approximately 1.5 animals per acre for 60 days. For more information on stocking rate, access fact sheet PSS-2871, *Stocking rate: The key to Successful Livestock Production*.

Hay production

Spring-planted oats harvested for hay should be cut at early heading. Once the seedheads begin to emerge, there will be no appreciable increase in forage yield. Likewise, once the seedheads begin to emerge, a substantial decrease in nutritive value occurs, due to the accumulation of stem tissue and also leaf loss. If harvested for hay, delaying harvest until early heading will maximize yield for that production method.

Finally, do not consider spring-planted oat to be the fool-proof solution to remedy a short forage supply. There are potential risks involved due to weather, insects and diseases. With planning and a little luck, a spring-planted oat crop may add some additional forage to an already short or non-existent forage supply.

Keys for successful forage spring oat production

- Seed quality is crucial. A minimum germination of no less than 85 percent will ensure an adequate stand with reasonable growing conditions.
- Do not cut back on seeding rate. Because spring-planted oat forms a single stem with minimal tillering, it is necessary to have a high plant population.
- Apply 40 to 60 pounds of nitrogen per acre after establishment. An additional 30 pounds of nitrogen per acre can be applied after grazing, if conditions allow. Nitrogen amounts can also be reduced if there is carryover from the failed wheat crop.
- Plan a grazing strategy to allow plants to recover. Start grazing when plants reach 6 to 8 inches in height. Stop grazing when plants are 2 to 3 inches tall. Allowing plants to recover will increase overall forage production during spring and early summer.
- When harvested for hay, cut at early heading to optimize yield and quality.

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